

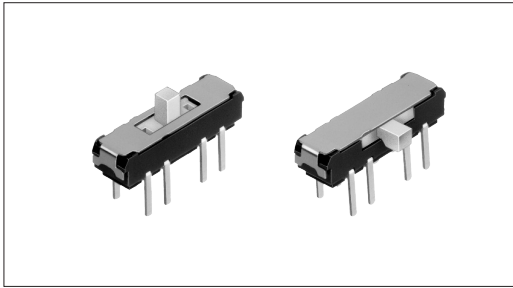
Slide Switch 3.5(H)mm, 2mm-travel Type

SSSS2 Series



Excellent application for designing compact and high density portable devices.

- Detector
- Push
- Slide
- Rotary
- Encoders
- Power
- Dual-in-line
Package Type
- TACT Switch™
- Custom-
Products
- Small size
General Use type
- Big size
General Use type
- Other Use type



Typical Specifications

Items		Specifications
Rating (max.) / (min.) (Resistive load)		0.3A 6V DC/50μA 3V DC
Contact resistance (Initial performance/After lifetime)		70mΩ max./130mΩ max.
Operating force		Refer to the dimensions.
Operating life	Without load	10,000cycles※
	With load	10,000cycles (0.3A 6V DC)※

Note

※Operating life for SSSS213202 is 100 cycles

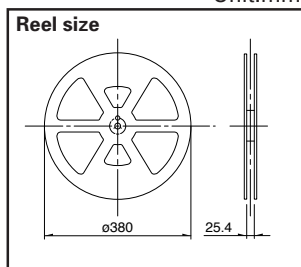
Product Line

Travel (mm)	Actuator direction	Actuator length (mm)	Poles	Positions	Changeover timing	Soldering	Minimum order unit (pcs.)	Products No.	Drawing No.				
2	Vertical	2	1	2	Non shorting	Manual, Dip	10.000	SSSS213000	1				
				3				SSSS211900	2				
			2	2				SSSS222700	3				
				3				SSSS223600	4				
			Horizontal	2				1	2	Reflow	4.800	SSSS213202	5
									3	4,000	SSSS212901	6	
	2	2			Manual, Dip	10.000	SSSS213100	7					
		3					SSSS212200	8					
	Horizontal	2	1	2	Non shorting	Manual, Dip	10.000	SSSS212400	9				
				3				SSSS223200	10				
				4				SSSS223900	11				
				2				SSSS224100	12				
	Horizontal	2	1	2	Non shorting	Reflow	5.600	SSSS211603	13				
				3				SSSS212301	14				
				2				SSSS224001	15				
				3									

Packing Specifications

Taping

Unit:mm



Series	Actuator direction		Number of packages (pcs.)			Tape width (mm)	Export package measurements (mm)
			1 reel	1 case /Japan	1 case /export packing		
SSSS213202	Vertical	1-pole, 2-positions		1,200	2,400	4,800	428 × 413 × 172
SSSS212901		1-pole, 3-positions		1,000	2,000	4,000	
SSSS211603 SSSS212301 SSSS224001	Horizontal			1,400	2,800	5,600	406 × 406 × 190

Bulk

Series	Number of packages (pcs.)		Export package measurements (mm)
	1 case /Japan	1 case /export packing	
SSSS211900,SSSS212200,SSSS212400,SSSS213000, SSSS213100,SSSS222700,SSSS223200,SSSS223600, SSSS223900,SSSS224100	2,000	10,000	400 × 270 × 290

Notes

- Products other than those listed in the above chart are also available. Please contact us for details.
- Please place purchase orders per minimum order unit N (integer).

Dimensions

Vertical Actuator Type

Unit:mm

No.	Photo	Style	PC board mounting hole dimensions (Viewed from direction A)
1			
2			
3			
4			

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

TACT Switch™

Custom-
Products

Small size
General Use type

Big size
General Use type

Other Use type

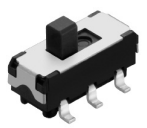
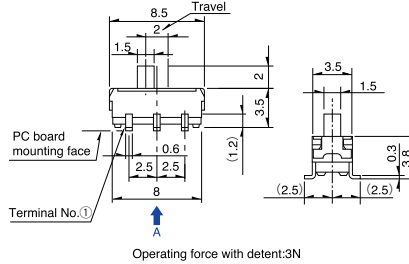
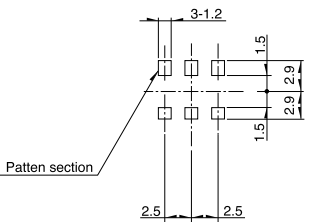
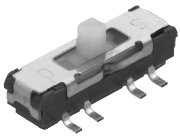
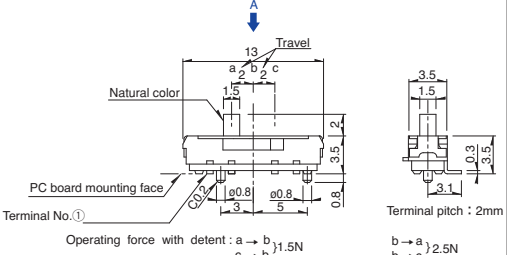
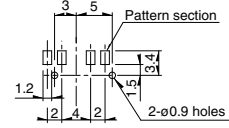

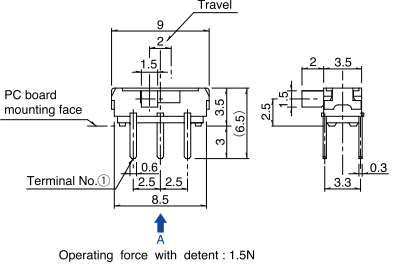
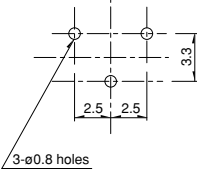
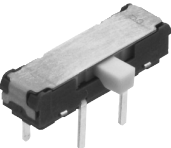
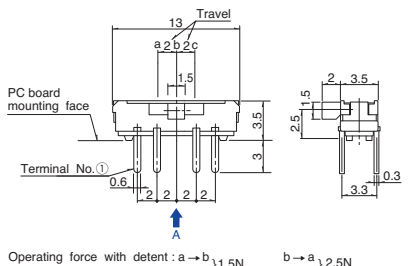
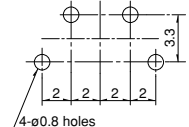
Slide Switch 3.5(H)mm, 2mm-travel Type | SSSS2 Series

Dimensions

Horizontal Actuator Type

Unit:mm

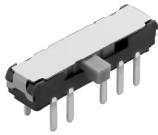
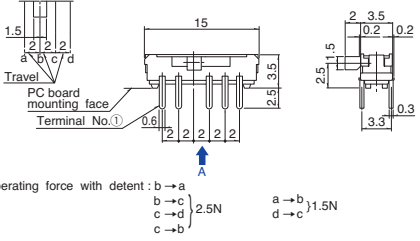
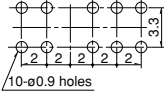

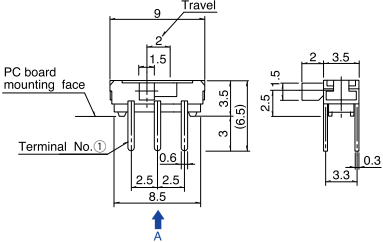
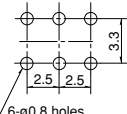
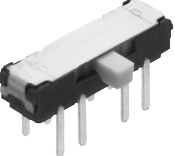
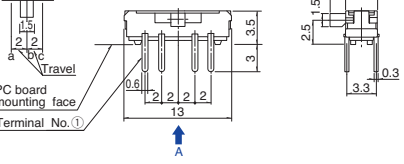
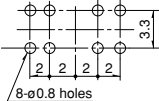
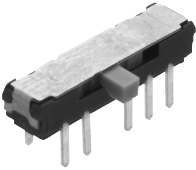
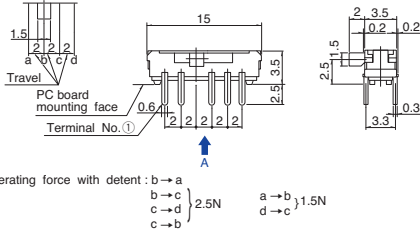
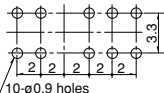
- Detector
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General Use type
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No.	Photo	Style	PC board mounting hole dimensions (Viewed from direction A)
5		 <p>Operating force with detent: 3N</p>	 <p>Pattern section</p>
6		 <p>Operating force with detent : a → b } 1.5N b → a } 2.5N c → b } 1.5N</p> <p>Terminal pitch : 2mm</p>	 <p>Pattern section</p> <p>2-ø0.9 holes</p>
7		 <p>Operating force with detent : 1.5N</p>	 <p>3-ø0.8 holes</p>
8		 <p>Operating force with detent : a → b } 1.5N b → a } 2.5N c → b } 1.5N</p>	 <p>4-ø0.8 holes</p>

Dimensions

Horizontal Actuator Type

Unit:mm

No.	Photo	Style	PC board mounting hole dimensions (Viewed from direction A)
9		 <p>Operating force with detent : $b \rightarrow a$ $b \rightarrow c$ $c \rightarrow d$ $c \rightarrow b$ } 2.5N $a \rightarrow b$ $d \rightarrow c$ } 1.5N</p>	 <p>10-ϕ0.9 holes</p>
10		 <p>Operating force with detent : 1.5N</p>	 <p>6-ϕ0.8 holes</p>
11		 <p>Operating force with detent : $a \rightarrow b$ $c \rightarrow b$ } 1.5N $b \rightarrow a$ $b \rightarrow c$ } 2.5N</p>	 <p>8-ϕ0.8 holes</p>
12		 <p>Operating force with detent : $b \rightarrow a$ $b \rightarrow c$ $c \rightarrow d$ $c \rightarrow b$ } 2.5N $a \rightarrow b$ $d \rightarrow c$ } 1.5N</p>	 <p>10-ϕ0.9 holes</p>

Detector

Push

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Package Type

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Products

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General Use type

Big size
General Use type

Other Use type

Slide Switch 3.5(H)mm, 2mm-travel Type | SSSS2 Series

Dimensions

Horizontal Actuator Type, Reflow Type

Unit:mm








- Detector
- Push
- Slide
- Rotary
- Encoders
- Power
- Dual-in-line Package Type
- TACT Switch™
- Custom-Products
- Small size General Use type
- Big size General Use type
- Other Use type

No.	Photo	Style	PC board mounting hole and land dimensions (Viewed from direction A)
13		<p>Operating force with detent : 1.5N</p>	
14		<p>Operating force with detent : a → b } 1.5N b → a } 2.5N c → b } 1.5N b → c } 2.5N</p>	
15		<p>Operating force with detent : a → b } 1.5N b → a } 2.5N c → b } 1.5N b → c } 2.5N</p>	

Circuit Diagram (Viewed from Direction A)

<p>1-pole, 2-positions Drawing No. : 1, 5, 7</p>	<p>1-pole, 3-positions Drawing No. : 2, 6, 8</p>	<p>2-poles, 2-positions Drawing No. : 3, 10</p>
<p>2-poles, 3-positions Drawing No. : 4, 11, 15</p>	<p>1-pole, 4-positions Drawing No. : 9</p>	<p>2-poles, 4-positions Drawing No. : 12</p>
<p>1-pole, 2-positions Drawing No. : 13</p>	<p>1-pole, 3-positions Drawing No. : 14</p>	

List of Varieties

Series		SSAL	SSAJ	SSAG	SSAH	SSSS8	SSSS7 ※1	SSSS2	
Photo									
Outline specifications	Travel (mm)	2	1.4	1.5		1.5 2		2	
	Actuator direction	Horizontal				Vertical Horizontal	Horizontal	Vertical Horizontal	
	Number of poles	1				1 2			
Dimensions (mm)	W	7.6	5.5	9.05	9.5	11.2	8.8	13	
	D	2.6	2.5	3		2.6	3	3.5	
	H	1.2	0.7	1.15	0.9	1.4	2		
Operating temperature range		-10°C to +60°C			-30°C to +60°C	-40°C to +85°C			
Automotive use		—	—	—	—	○	—	—	
Rating (max.)/(min.) (Resistive load)		10mA 5V DC			1mA 5V DC	0.3A 5V DC	0.3A 4V DC	0.3A 6V DC	
		50μA 3V DC							
Electrical performance	Initial contact resistance	10Ω max.	300mΩ max.	200mΩ max.		70mΩ max.			
	Insulation resistance	100MΩ min. 100V DC					100MΩ min. 500V DC		
	Voltage proof	100V AC for 1minute					500V AC for 1minute		
Mechanical performance	Terminal strength	3N for 1minute							
	Actuator strength	10N				10N	20N		
Durability	Operating life without load	100,000cycles 10Ω max.	10,000cycles 500mΩ max.	30,000cycles (Lockside) 100,000cycles 500mΩ max. (Recoilside)	10,000cycles 300mΩ max.	10,000cycles 100mΩ max. ※2			
	Operating life without load Load:as rating	10,000cycles 130mΩ max. ※2							
Environmental performance	Cold	-40±2°C for 96h		-20±2°C for 96h		-40°C±2°C for 96h	-20°C±2°C for 96h		
	Dry heat	85±2°C for 96h							
	Damp heat	40±2°C, 90 to 95%RH for 96h							
Soldering	Manual soldering	350±5°C 3s max.				300±5°C 5s max.	300±5°C 3s max.	350±10°C 4s max.	
	Dip soldering	260±5°C 3±1s							
	Reflow soldering	Please see P.175							
Poles-positions	1-2	●	●	—	—	●	●	●	
	1-3	—	—	●	●	●	●	●	
	1-4	—	—	—	—	●	—	●	
	2-2	—	—	—	—	●	—	●	
	2-3	—	—	—	—	●	—	●	
	2-4	—	—	—	—	—	—	●	
	4-2	—	—	—	—	—	—	—	
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Detector
Push
Slide
Rotary
Encoders
Power
Dual-in-line Package Type
TACT Switch™
Custom-Products

Small size General Use type
Big size General Use type
Other Use type

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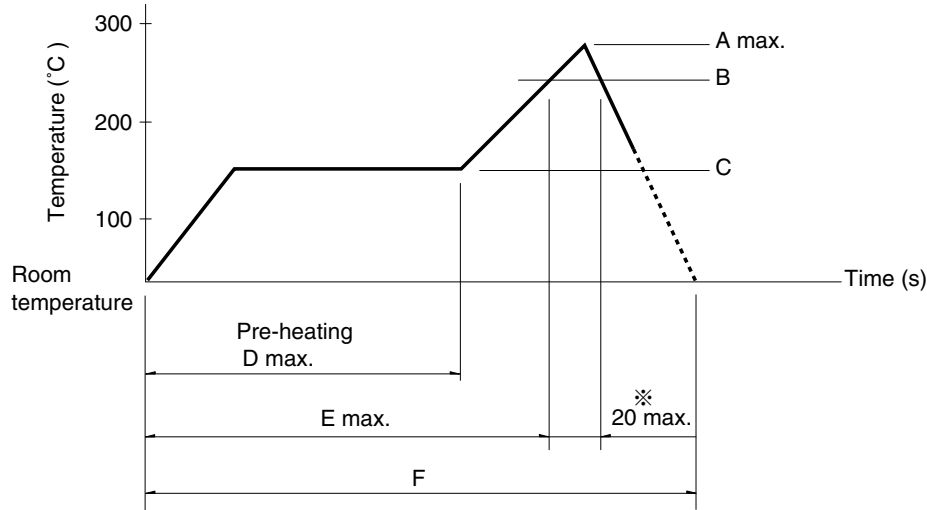
Notes

- ※1. The operating temperature range for automotive applications can be raised upon request. Please contact us for details.
- ※2. Operating life for SSSS213202 is 100 cycles
- marks in "Available for automotive use" indicate that some of the series products can work at the operating temperature range from -40°C to +85°C.

Soldering Conditions

Example of Reflow Soldering Condition

1. Heating method: Double heating method with infrared heater.
2. Temperature measurement: Thermocouple 0.1 to 0.2 ϕ CA (K) or CC (T) at soldering portion (copper foil surface). A heat resisting tape should be used for fixed measurement.
3. Temperature profile



Series (Reflow type)			A (°C) 3s max.	B (°C)	C (°C)	D (s)	E (s)	F (s)
SSSS2	Vertical	1-pole, 3-positions	250	200	150	120	—	—
	Horizontal	1-pole, 2-positions						
	Vertical	1-pole, 2-positions	240					
	Horizontal	1-pole, 3-positions 2-poles, 3-positions						
SSSS7			250					
SSAH, SSAG, SSAJ			260	230				
SSSS8	Horizontal	1-pole, 2-positions 1-pole, 3-positions (1.5mm)	255	200				
	Vertical		240	220				

Notes

1. The condition mentioned above is the temperature on the mounting surface of a PC board. There are cases where the PC board's temperature greatly differs from that of the switch, depending on the PC board's material, size, thickness, etc. The above-stated conditions shall also apply to switch surface temperatures.
2. Soldering conditions differ depending on reflow soldering machines. Prior verification of soldering condition is highly recommended.
3. ※SSAH and SSAG only 40's.

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